

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

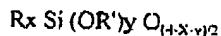
Applicant(s): Ma Shiping	
Application No.: 10/004,978	
Filed: 12/3/2001	Group Art Unit: 1711
Title: Flame Retardant Resin Composition and Molded Products Thereof	Examiner: U. Rajguru
Attorney Docket No.: GEPL.P-080	Confirmation No.: 7848

SECOND DECLARATION UNDER RULE 132

The undersigned declares as follows:

1. I am the named inventor in the above-referenced application, and as such I am familiar with the application, including the claims.

2. Experiments were performed to show the performance difference between a silicone in accordance with the invention, and a silicone of the type disclosed in the Fuhr reference, US Patent No. 5,658,974. Samples were prepared with the compositions indicated in the Table. In the compositions according to the invention, the silicone used in the composition of the invention was silicone C1 from the application. As a silicone comparable to those described in Fuhr, I used a solid silicone resin having formula



R = Methyl or Phenyl group in ratio of 80/20

R' = Methyl or Hydrogen radical

X = 1

Y = 0.02

This silicone has a low  $\gamma$  value which is consistent with the ability to obtain a high molecular weight product. In contrast, the silicone of the claimed invention is a liquid with a higher  $\gamma$  value of 0.2 to 2.4 (Page 2) of the present application, claim 1).

5. Various physical tests were performed on the samples. The results of these are also summarized in the Table. In addition, the results from the comparative example in the first declaration, which include no silicone are included in the Table.

	Exam 1.	Exam 2.	Comp Exam 1	Comp Exam 2	Comp 1 from 1st Decl	Comp 2 from 1st Decl
Polycarbonate(A1)	84	84	84	84	84	84
ABS(A2)	10	10	10		10	10
BPADP	4		4		4	
RDP(B)		4		4		4
Silicone(C1)	1	1				
FS1			1	1		
PTFE (D)	0.5	0.5	0.5	0.5	0.5	0.5
Impact resistance (ZOD (kg-cm/cm)	50	50	80	70	77	65
Deflection temperature under loading (deg C)	111	108	113	110	113	110
Initial PC molecular weight	45000	45000	45000	45000	45000	45000
After aging PC molecular weight	43000	37000	43000	37000	43000	37000
Burn time of 1.5mm thickness sample UL94(Sec)	38	25	70	60	80	65
UL rating	V-0	V-0	V-1	V-1	V-1	V-1

As can be seen, the Fuhr-type silicone (FS1) did not improve the UL Flame-retardance rating, and had only a marginal impact on the burn time. The silicone that exemplifies this invention, however substantially reduces the burn time and provides a higher UL rating.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine

or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

dated: Dec. 30, 2004

Ma Shiping  
Ma Shiping